

CLAIMS

What is claimed is:

1. A refrigerator, comprising:
a refrigerator compartment maintained at a predetermined refrigerator temperature;
a freezer compartment maintained at a predetermined freezer temperature;
a temperature controlled chamber provided in the refrigerator compartment, partitioned from a remainder of the refrigerator compartment;
a cool air inlet port to introduce cool air from the freezer compartment into the temperature controlled chamber; and
a cool air outlet port to discharge the cool air from the temperature controlled chamber into the freezer compartment.
2. The refrigerator according to claim 1, wherein the temperature controlled chamber has an opening at a front, and comprises:
a rear insulation wall;
upper and lower insulation walls;
side insulation walls; and
a drawer to store food items movable through the front opening.
3. The refrigerator according to claim 2, wherein:
the refrigerator compartment and the freezer compartment are partitioned from each other by a vertical partition wall arranged between the refrigerator and freezer compartments;
and
the cool air inlet port and the cool air outlet port are located in the vertical partition wall, so that the cool air is circulated between the freezer compartment and the temperature controlled chamber through the cool air inlet and outlet ports.
4. The refrigerator according to claim 3, comprising:
an intake damper installed in the cool air inlet port to open and close the cool air inlet port.
5. The refrigerator according to claim 4, further comprising:

a cooling fan positioned adjacent to the cool air inlet port, to forcibly circulate the cool air from the freezer compartment to the temperature controlled chamber.

6. The refrigerator according to claim 5, wherein the intake damper comprises:
a thin plate,

wherein the thin plate opens the cool air inlet port in response to the cool air flowing into the temperature controlled chamber when the cooling fan is operated, and closes the cool air inlet port in response to a stoppage of flow of the cool air when the cooling fan is stopped.

7. The refrigerator according to claim 6, further comprising:
a temperature sensor mounted in the temperature controlled chamber to control operation of the cooling fan, operating the fan when a first temperature of the temperature controlled chamber rises above a predetermined temperature, and stopping fan operation when the first temperature reaches the predetermined temperature.

8. The refrigerator according to claim 7, wherein:
the predetermined temperature is between the predetermined refrigerator temperature and the predetermined freezer temperature.

9. A refrigerator, comprising:
a refrigerator compartment;
a freezer compartment;
a chamber partitioned from the refrigerator and freezer compartments; and
a port to exchange air between the freezer compartment and the chamber.

10. The refrigerator according to claim 9, wherein the chamber comprises:
a drawer that moves in and out of the chamber to store food items.

11. The refrigerator according to claim 9, wherein the port comprises:
an inlet port to introduce air from the freezer into the chamber; and
an outlet port to discharge air from the chamber into the freezer.

12. The refrigerator according to claim 11, wherein the port further comprises:

a fan positioned adjacent to the inlet port to forcibly circulate air from the freezer to the chamber.

13. The refrigerator according to claim 12, wherein:
the fan is positioned in the chamber.

14. The refrigerator according to claim 12, wherein:
the fan is positioned in the freezer.

15. The refrigerator according to claim 11, wherein the port further comprises:
a fan positioned in the inlet port to forcibly circulate air from the freezer to the chamber.

16. The refrigerator according to claim 12, wherein the port further comprises:
an intake damper to selectively open and close the inlet port.

17. The refrigerator according to claim 16, wherein:
the intake damper opens and closes the intake port by the flow of air, without an
additional drive device.

18. The refrigerator according to claim 16, wherein the intake damper comprises:
a plate that opens and closes the inlet port in response to air flow from the freezer.

19. The refrigerator according to claim 18, wherein:
the plate is hinged at a first end to rotate the plate to open and close the inlet port in
response to air flow from the freezer.

20. The refrigerator according to claim 18, wherein:
when the fan operates, air flows from freezer and moves the plate, thereby opening the
inlet port.

21. The refrigerator according to claim 20, wherein the chamber further comprises:
a temperature sensor that operates the fan when a sensed temperature is above a
predetermined temperature.

22. The refrigerator according to claim 21, wherein:
the predetermined temperature is between a freezer temperature and a refrigerator temperature.

23. An apparatus with a refrigerator compartment and a freezer compartment,
comprising:
a temperature controlled chamber, maintained at a predetermined temperature between
a temperature of the refrigerator compartment and a temperature of the freezer compartment.

24. The apparatus according to claim 23, wherein:
the temperature controlled chamber is cooled by air fed from the freezer compartment.